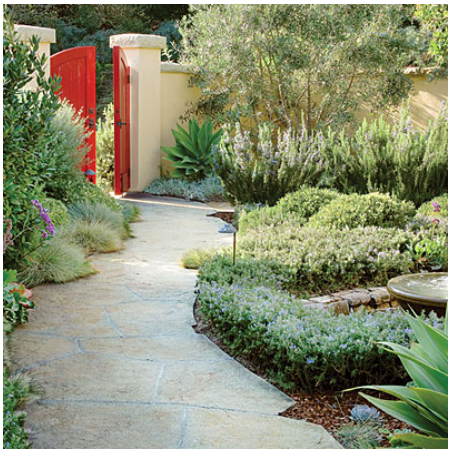
A DROUGHT TOLERANT GARDEN

What is a 'drought tolerant garden?' Typically, the term 'drought tolerant' describes the type of plant material used in the design of an outdoor space. Drought tolerant plants are either plants that are native to a particular area or non-native plants that are adaptable to the local climate and have similar water-use requirements as the native plant species. Many plants native to the coastal belts and interior valleys of Southern California have similar water needs as plants found in Mediterranean climates, such as Chile, Australia and South Africa. The Mediterranean climate is typically characterized by warm, dry summers and cool to mild, wet winters. However, in addition to drought tolerant plant material, a drought tolerant garden frequently incorporates several water saving techniques such as efficient irrigation systems, soil conditioning, permeable paving, storm water retention and minimizing lawn areas. Drought tolerant gardens are attractive, enjoyable and environmentally sensible.

Why install a 'drought tolerant garden?' Water conservation through landscaping offers the greatest single opportunity for water savings in an urban area. About forty percent (40%) of urban water is used to irrigate landscaped areas in California. A drought tolerant garden design can reduce installation costs, maintenance costs and reduce the amount of water used for landscaping. Due to the increasing demand for water and the limited supply in Ventura County, water-efficient landscaping is now mandated by all local jurisdictions for any new project that exceeds 5,000 square feet in size.

How to design a 'drought tolerant garden?' A successful 'drought tolerant garden' takes time and patience. However, there are several simple steps that can be taken to create an attractive, enjoyable and manageable outdoor space:

Planning: The first step to successfully create your drought tolerant garden is to plan how your outdoor space will be used. It is important to determine the uses for the space you have available before you can begin the design process. Is there a need for playing or exercise? Is a large lawn area necessary or needed? Are areas for entertaining guests important? Quit areas for relaxing? What type of amenities are desired, such as a play ground, vegetable garden or an area for dining? Compiling a list of uses and categorizing which items are the most important to you is the first step of the design process.



Site Design: When starting the design process, creating a sketch of the outdoor area is useful to program the elements identified in the planning process. Start with these basic steps:

- Visualize: Take time to visualize the size of the space and determine what uses fit within your area. Simply ask yourself 'what makes sense.' More often than not, many of the elements identified in the planning process may simply just not work within the space. They may be too large and overwhelm the space or there may be too many and create an awkward balance to the overall design. Keep it simple and program the elements that are most important first.
- Style: Your home is the center piece of your yard and should set the tone for your design. Use the elements of your architecture style and let them set the tone. For instance, the straight lines of

formal architecture, such as Colonial or Traditional architecture should transfer to the garden and create a formal layout of walkways and patios. Less formal architecture, such as Spanish or Craftsman tend to create informal meandering walkways, patios and planting beds. Match the building materials used on the architecture with walkways and patios to balance the layout of your garden design.

- Lawn Reduction: How much lawn is actually needed? The size of the lawn area should reflect how much lawn is actually needed for recreational activities. Consider lawn substitutes such as ground cover, patios, planting beds, dry river beds, boulders and cobble.

<u>Planting Design:</u> Choosing drought tolerant plant material is not an easy task. Visiting your local nursery is the best way to become acquainted with native and drought tolerant plant types that are readily available in your area. The internet is also a useful alternative.

- Proper grouping: Group plants together that have similar water requirements. It is also important to group plants together based on sun exposure. Many drought tolerant plants require full sun and will perform poorly if grown in the shade. However, there are many plants that are accustomed to growing in shade and perform well with minimal supplemental water.
- Foundation: Large shrubs make up the foundation planting and should be placed towards the rear of the planting bed. The height of the foundation planting is important to add mass and volume to the overall design. Foundation plantings are helpful to screen walls and break up the mass of some architectural features.
- Layering: Smaller accent shrubs and perennials should be installed in masses towards the front of the planting bed. The planting layout should create a layered effect of color, variety and texture. Large shrubs are in the rear, followed by mid-size shrubs in the middle and small shrubs in front.
- Plant size: Know the height and width of the plant species at full maturity. Space plants based on mature width and place them where they can grow to maturity without blocking the architecture, windows or overwhelming the space they are installed.

  - Keep it simple: Plant in masses and use the same plant species in several areas throughout the garden. Mass planting unifies the design and provides balance. Too much variety can make the design look busy.
  - Framing: Use specialty plants to frame certain architectural features such as a doorway, or plants placed strategically in the garden to draw your attention. Specialty plants can be columnar in nature or plants with interesting features, texture or color.

<u>Irrigation and Drainage Design:</u> When designing or installing an irrigation system, understanding hydozones and the water requirements of individual plant species is critical to ensure healthy plants and to minimize irrigation water use.

- Hydrozones: Your garden typically will consist of many hydrozones. A hydrozone is an area of your garden that receives a different sun exposure from other areas. For instance, a planter installed on the north side of a building will receive shade most of the day, while a planter installed on the south side of a building will receive full sun. Each of these areas is a different hydrozone. An irrigation system should be installed so that hydrozones with high sun exposure are irrigated independently from hydrozones with low sun exposure.

- Water requirements: Plants need to be grouped and irrigated with plants of similar watering needs. Mixing plants with different water use requirements will cause one plant type to become over or under-watered.
- The irrigation system: Insuring that each area is only getting the water that it needs is critical to reduce supplemental irrigation water. Infrequent, deep watering is preferred to frequent shallow watering. Deep watering gets the water where the plants need it and minimizes runoff. There are many irrigation products on the market that help minimize runoff and encourage deep watering, such as low-volume sprinkler heads and drip irrigation systems.
- Drainage: Permeable paving such as gravel, decomposed granite and concrete pavers are good alternatives to hardscape surfaces and provide an opportunity to retain groundwater. Dry river beds can also be designed into the drainage pattern of a garden area to capture a significant portion of the annual rainfall runoff and infiltrate the rainfall back into the ground water supply, rather than flushing it out to the storm drain system.

Site Preparation: Well conditioned soil can reduce irrigation water use and improve the health of drought tolerant plant material. Soil that is well balanced with vital nutrients, neutral PH and uniform texture provides root nourishment and encourages drainage.

- Soil Conditioning: Soil amendment or organic matter is a critical component of garden soil and is necessary for healthy plant growth. Amending the soil also breaks up clay soils allowing adequate drainage and adds vital nutrients to sandy soils. Compost, commercially purchased garden amendment and manure are the most common types of amendment necessary to condition soil. These should be tilled into garden soil at a 4:1 ratio to a dept of 12". Additional amendment should be added to each container plant installed and mixed into the existing soil.
- Mulch: Bark mulch provides many important benefits to planting areas and the costs associated with the installation of mulch are comparable to direct annual cost savings, such as reduced water use and maintenance. Mulch reduces loss of water from the soil by evaporation, cools down the soil temperature, increases water retention and reduces runoff. Mulch prevents the germination of seeds and weeds and reduces the need for cultivation and the use of herbicides. Mulch improves the structure of the soil by adding vital nutrients and beneficial mycorrhizal fungus back into the soil as the mulch decomposes, reducing the need for chemical fertilization and improving plant health. Mulch also provides a rich brown color that contrasts with the plants, enhancing the look of the planter.

A drought tolerant garden makes environmental sense. It can reduce the amount of water used to irrigate landscaped areas, it can encourage the introduction of wildlife to an urban environment and it is a place to spend time with family or enjoy a relaxing afternoon on your own. We challenge you to use your creativity and encourage you to create your own water conserving garden in your home.

Additional information can be found at the City of Moorpark Library or from the following sources:
Landscape Plants for Western Regions by Bob Perry
The Sunset Western Garden Book